



# On the Bayou

SEPTEMBER 2018



Editor-in-Chief  
Dawn Reed

Associate Editors  
Trinia Bax  
Suhad Wojkowski

Committee Members  
Mary Lovisa  
Terri Von Hoven  
Kelley Williams

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## Message from the Director

### Dr. Deepak Bhatnagar

I was pleased to see the big turnout for our Awards Day Ceremony this year. Together we celebrated all our accomplishments for 2017, with the Employees of the Year Awards, as well as all those nominated for these awards. Additionally, last year a third of our staff received an outstanding rating, with more than half with superior rating. That is a very large number of people performing exceptionally well.

We also took this event as an opportunity to recognize the volunteer spirit that exists at SRRC, with a high number of very hard working individuals who volunteer to serve on various committees. I personally express my gratitude to one and all alike. Your work makes the Center work very efficiently, and makes everyone's job easier.

For the first time this year we also recognized the contributions of the staff of our contractor, Pontchartrain Partners. Even though our Contractor is relatively new to SRRC, their staff has been here at SRRC for many years, and has demonstrated loyalty and dedication to SRRC. They have suffered with us through thick and thin, especially in the aftermath of Hurricane Katrina. Their staff's institutional memory about SRRC helped us significantly in preparing for things like recovery from Katrina, and more recently the BISHOP review. In other words, we are grateful for their service.

Many other good things are happening at the Center, along with significant infrastructure improvements to our facility, with financial support from our Area Office as well as HQ. This support is gratefully acknowledged.

## Cultural Diversity Day

Submitted by: Elena Graves

The 2018 SRRC Cultural Diversity Day Celebration was held on August 27. Twenty employees volunteered as cooks, and provided wonderful samplings of foods that represented their heritage from Europe, Asia and the Americas. Several other employees volunteered to assist in the preparations for the event and the clean up after. The celebration was attended by over fifty employees who tasted the culinary delights and learned about different cultures represented by our SRRC staff.

Elena Graves and Jeannine Moraitis served as co-chairpersons for the event and greatly appreciated the assistance from the SRRC cooks and volunteers and the efforts of the contract employees who made this event a success.



The Chefs





## Events and Observances (cont.)

### Hispanic Heritage Month

Submitted by: David Ambrogio and Michael Santiago

Each year Federal agencies celebrate Hispanic Heritage Month (HHM) to recognize Hispanic contributions, history, and culture in the U.S.

Hispanic Heritage Month, whose roots go back to 1968, begins each year on September 15, the anniversary of independence of five Latin American countries: Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua. Mexico, Chile and Belize also celebrate their independence days during this period. SRRC will observe HHM with several activities and exhibits throughout the month of September.

Our first event was a brown bag talk, Portraits of Puerto Rico by **Dr. Michael Santiago** held on September 11. Dr. Santiago, a research chemist at SRRC, shared historical tidbits of his home island of Puerto Rico. The talk also included many pictures of Puerto Rican towns and important landmarks that he took in his visits home. Old San Juan, the Fortress El Morro, the Old San Juan Cemetery, the National Rainforest El Yunque and the town island of Culebra are few of the sights discussed in the talk. Dr. Santiago also talked about Hurricane Maria and the impact it had on the 3+ million people who live in the island, the damage to infrastructure and to the rainforest El Yunque. In addition to the talk, the event featured a table with musical and cultural items from Latin America, an art print featuring the Puerto Rican flag, and handmade items made by Puerto Rican artists. Sweets and tropical drinks made with mango and tamarind were served.



The **HHM luncheon** will be on September 20, and the guest speaker will be **Dr. James Huck**, Assistant Director, Stone Center for Latin American Studies at Tulane University. Please watch for menu details soon.

An exhibit is on the ground floor and highlights Hispanic Heritage Month in general and Puerto Rico in particular.

## Events and Observances (cont.)

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### Seminar for SRRC Outstanding Paper of 2017

Submitted by: Matt Lebar, Awards Committee Chair

**“Top 3 SRRC Papers of the Year Competition”** was held on August 16, 2018.

Out of the many significant manuscripts received and reviewed by the Awards Committee, the “Top 3” were selected to deliver 10 minute Center-wide presentations, with 5 minutes of Q&A, per senior or corresponding author.

The Committee goal here is to actively involve the Center in understanding some of the best work coming out of the SRRC and engage our own scientific community – in the form of meaningful questions for our authors. The presentations also give the evaluation Committee a better understanding of the research and helps in guiding them in the selection of the most Outstanding Paper.

The following 3 papers were presented during a well-attended seminar session:

**Gregory N. Thyssen**, David D. Fang, Rickie B. Turley, Christopher B. Florane, Ping Li, Christopher P. Mattison and Marina Naoumkina. [A Gly65Val substitution in an actin, GhACT\\_LI1, disrupts cell polarity and F-actin organization resulting in dwarf, lintless cotton plants](#). The Plant Journal (2017) 90, 111–121.

**Christopher P. Mattison**, Ruhi Rai, Robert E. Settlege, Doug J. Hinchliffe, Crista Madison, John M. Bland, Suzanne Brashear, Charles J. Graham, Matthew R. Tarver, Christopher Florane and Peter J. Bechtel. [RNA-Seq Analysis of Developing Pecan \(\*Carya illinoensis\*\) Embryos Reveals Parallel Expression Patterns among Allergen and Lipid Metabolism Genes](#). J. Agric. Food Chem. 2017, 65, 1443–1455.

Jay Shockey, **Michael Dowd**, Brian Mack, Matthew Gilbert, Brian Scheffler, Linda Ballard, James Frelichowski, Catherine Mason. [Naturally occurring high oleic acid cottonseed oil: identification and functional analysis of a mutant allele of \*Gossypium barbadense\* fatty acid desaturase-2](#). Planta (2017) 245:611–622.



Greg Thyssen



Chris Mattison



Michael Dowd

**SRRC Awards Day** ceremony was held on September 13<sup>th</sup>. It is on this day that we celebrate our Center's achievements and accomplishments for 2017.

Awards Day Ceremony kicked off in the Bayou Conference Room followed by the Awards recognition lunch. The SRRC Employee Advisory Council sponsored the luncheon in recognition of the entire staff's daily contributions towards the success of SRRC. Honorable mention gifts were given to all employees that were nominated for various awards.

### **Our Employees of the Year, 2017 Award Recipients are:**

#### **Outstanding Early Career Scientist**

**Gregory N. Thyssen**, Research Molecular Biologist  
Cotton Chemistry and Utilization Research Unit  
Cotton Fiber Bioscience Research Unit

#### **Outstanding Scientist**

**Christopher P. Mattison**, Molecular Biologist  
Food Processing and Sensory Quality Research Unit

#### **Outstanding Support Scientist**

**Carol H. Carter-Wientjes**, Biologist  
Food and Feed Safety Research Unit

#### **Outstanding Paper**

**Christopher P. Mattison**, Molecular Biologist  
Food Processing and Sensory Quality Research Unit

Co-Authors: **Doug J. Hinchliffe, Crista A. Madison, John M. Bland, Suzanne S. Brashear, Christopher B. Florane, and Peter J. Bechtel**

Title of paper: RNA-Seq Analysis of Developing Pecan (*Carya illinoensis*) Embryos Reveals Parallel Expression Patterns among Allergen and Lipid Metabolism Genes.

Journal of Agricultural and Food Chemistry 65:1443-1455 (2017)

#### **Technology Transfer Adoption**

**Maureen S. Wright, Isabel M. Lima, and Renee L. Bigner**  
Commodity Utilization Research Unit  
"Effect of Compacting and Ensiling on Stabilization of Sweet Sorghum Bagasse"

#### **Outstanding Technician/Aide**

**Jade N. Smith**, Physical Science Technician  
Cotton Chemistry and Utilization Research Unit

#### **Outstanding Administrative Support Employee**

**Olga L. Carias**, Office Automation Assistant  
Administrative Office

#### **Outstanding Office Support Employee**

**Valerie E. Reed**, Program Support Assistant  
Food and Feed Safety Research Unit

#### **Outstanding Contributor to Cultural Diversity**

**C. David Ambrogio**, Biological Laboratory Technician  
Food and Feed Safety Research Unit

#### **Most Cooperative Person or Group**

**Shannon B. Beltz**, Biological Science Technician  
Food and Feed Safety Research Unit



## SRRC Awards Day (cont.)

### *Employees of the Year 2017 Award Recipients*



*Outstanding Paper Award Winners*



*Employees of the Year Award Winners*



*Honorable Mention Award Winners*

# Safety Corner

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**Submitted by: Shannon Beltz**



Flu Shots were administered on Monday 9/10 and Monday 9/17.

The flu shots were open to all workers at SRRC with insurance (Pontchartrain Partners, SPRI, LDAF, and FEMA). Please spread the word and let's get everyone vaccinated against the flu! Unless you have some special health concern, the CDC recommends the flu shot for those 6 months old and up.

In August we received the follow up report from our BISHOP inspection. We have been working very hard to implement all of their recommendations and take appropriate corrective actions. THANK YOU all so much for your help with this effort. You have all worked diligently and expeditiously to take corrective action, and have been very receptive to their recommendations. This is a tremendous help for our Safety team as we compile our response to their report. Please give yourselves a high five for your efforts! We will continue to work on a few recommendations that may require additional time; maybe a few weeks to complete. It was important to get as much done as soon as possible, and we have because most of the deficiencies were minor in nature! Merci beaucoup.

We recently hosted Respirator Fit Testing for our employees who wear respirators at work. It is important to regularly inspect your respirators by checking seals, straps, and cartridges. All respirator use must go through the Safety Office, regardless of respirator type or whether or not use is voluntary or required. Contact the Safety Office anytime if you have questions about respirator use.



If you need a new inspection tag for your shower or eyewash, please contact the Safety Office!!!

We are planning to do our ANNUAL SAFETY TRAINING sometime in October ... dates to come soon. There will be new items to discuss and we look forward to seeing you all then ☺

## Autoclave Safety Training

Submitted by: Shelia Parker

An **Autoclave** is a strong, heated container used for chemical reactions and other processes using high pressures and temperatures, e.g., steam sterilization. Autoclaves pose many hazards including physical hazards (e.g. heat, steam and pressure) and biological hazards.

Because of these hazards, **all users of Autoclaves are required to view this training and document completion.**

<https://www.youtube.com/watch?v=T901F2W7wks>

Each autoclave has unique characteristics:

First, review and understand the owner's manual before using any autoclave for the first time and as needed thereafter.

Contact the manufacturer to request on-site training as needed, and ensure the owner's manual is readily available in case questions arise during operation.

Autoclave maintenance is an important aspect of a properly functioning autoclave. Follow the manufacturer's recommendations for preventative maintenance and ensure all contractors are approved by the manufacturer.

Maintenance should include periodic efficiency tests (e.g. *Bacillus stearothermophilus* spore testing) to ensure the autoclave is functioning properly.

Do not autoclave items containing corrosives (e.g. acids, bases, phenol), solvents or volatiles (e.g. ethanol, methanol, chloroform) or radioactive materials.

### Utilize the following Autoclave Safety Practices:

1. Before using the autoclave, check inside the autoclave for any items left by the previous user that could pose a hazard.
2. Clean the drain strainer before loading the autoclave.
3. **Load the autoclave properly** as per the manufacturer's recommendations. Do not overload; tie bags loosely; steam needs to penetrate the densest part of the load.
4. To prevent bottles from shattering during pressurization, the caps of containers with liquids must be loosened before loading.
5. Use a tray with a solid bottom and walls to contain the contents and catch spills.
6. Add water to the autoclave bags to facilitate steam generation.
7. Add 1/4 to 1/2 inch of water to the tray so the bottles will heat evenly.
8. Check plastic materials to ensure they are compatible with the autoclave.
9. Individual **glassware pieces should** be within a heat resistant plastic tray on a shelf or rack and **never placed directly on the autoclave bottom or floor.**
10. **Make sure the door of the autoclave is fully closed (latched)** and the correct cycle has been selected **before starting the cycle.**
11. Wear heat-resistant gloves when opening the autoclave door after a cycle. When there is a sharps hazard (e.g. biological waste), wear heat AND cut resistant gloves.
12. Before removing autoclaved items, wait 5 minutes for loads containing only dry glassware, and 20 minutes for autoclaved liquid loads.
13. At a minimum, when removing items from an autoclave, safety glasses, a lab coat, sleeve protectors and heat-resistant gloves should be worn.
14. For non-liquid loads, let the glassware cool for 15 minutes before touching it with ungloved hands.

For liquid loads, let liquids stand for a full hour before touching with ungloved hands. Be sure others in the area know a heat hazard is present.



## Recognition

**Dr. H. N. Cheng** has been selected as one of the five people to receive the Chinese American Distinguished Service Award, sponsored by New Orleans Chinese Association. The award will be given at a special Chinese Cultural Festival that celebrates New Orleans's 300th anniversary at Lakeside Mall on September 21-22, 2018.



H.N. is a research chemist at the Center, where he has published many research papers and edited many books. He is active in the American Chemical Society and has served in numerous roles at national and local levels. At SRRC, he also chairs the Asia Pacific American Heritage Committee, where he helps to organize special events that introduce different Asian cultures to SRRC employees. Chinese culture is frequently featured.

In 2015, he gave a talk at the WWII Museum on the history of the war, including the Chinese Theater. He is an active member of the Chinese Baptist Church, serving as a Sunday school teacher, usher, and active fellowship participant.

"I am honored and humbled to accept this award," Cheng said. "I feel lucky to be in New Orleans where the Chinese community is so cohesive and vibrant. My wife and I would like to thank our friends in the community for helping us all these years."

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## Scientific Meetings

**Submitted by: Terri Von Hoven**

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|-------------|--|
| Sept. 11-12 | International Conference on Agricultural and Biosystems Engineering. Venice, Italy                                 |
| Sept. 9-14  | 19 <sup>th</sup> International Microscopy Congress. Sydney, Australia  |
| Sept. 15-18 | MycoKey International Conference: Integrated Solutions for Mycotoxin. Wuhan, China                                 |
| Sept. 17-19 | 13th PARIS International Conference on Chemical, Agriculture, Biological and Environmental Sciences. Paris, France |
| Sept. 20-22 | Global Conference on Plant Science and Molecular Biology. Rome, Italy  |

## News from The Employees' Benefit Club (EBC)

**Submitted by: Shawndrika Reed**

It has been a pleasure serving as President of the Employees' Benefit Club. I'm here to help with the ongoing success of EBC, so if you have any questions do not hesitate to contact me.

The Employees' Benefit Club objectives are:

- ♦ To promote and encourage a closer bond of fellowship and cooperation among members.
- ♦ To engage in other charitable, social, educational, literary, and scientific activities.

Our next EBC meeting will be held on **September 19<sup>th</sup> at 10am in Rm 0016** on the Ground Floor. The President, President-Elect (Vice President), Secretary, and Treasurer will take office September 1 and will hold office for a minimum of two years, or until their successors qualify according to our By-laws.

Election Updates:

Our incoming President is Jane McBride, and Treasurer is Trinia Bax.

The election process was pretty smooth. We didn't have any opposing nominations for either position, so by default the following positions were filled:

Vice President – Edward Deshotel  
Secretary- Ashley Willis Gabriel

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## Combined Federal Campaign (CFC)

**Submitted by: Suhad Wojkowski**

This year's Combined Federal Campaign charitable giving season, which supports many local and national non-profit charities, starts soon. Throughout the country last year, our civilian, postal and military personnel raised more than \$100 million for local, national, and international charity partners through the Combined Federal Campaign (CFC).

We kick-off this year's CFC Campaign season with a 5K Run/Walk and Kids Run inside of the Audubon Zoo on Monday, **October 8th**, entitled Creature Crawl for a Cause sponsored by the New Orleans Federal Executive Board. There is still time to register:

**Registration Site:** <https://runsignup.com/Race/LA/NewOrleans/CREATURECRAWLFORACAUSE>

**If you decide to register, do let Trinia know.**

We will be soliciting canvassers again this year from each research unit. Please be on the lookout for more details about our Campaign.

## Current and Upcoming Major Facility Projects at the Center

**Submitted by: Matt King**

New Construction of the **SRRC Headhouse and BSL-2P Greenhouse** to begin this fall.

This will entail the extension of the existing Greenhouse Headhouse on the west end of the current greenhouse structure, and the addition of a new temperature-controlled 2 Bay Greenhouse on the southside of the new Headhouse extension. The project should begin this fall, and be completed by the end of September 2019.

**Other current and upcoming major projects ongoing on at the Center include:**

### Safety/Security

- ◆ Completing items required from BISHOP safety review list.
- ◆ Upgrading security cameras in the Chemical Wing and Greenhouse.
- ◆ Installing Fire Alarm system components in Greenhouse.

### Information Technology

- ◆ Upgrading Fiber backbone for facility.
- ◆ Performing IT assessment.
- ◆ Repairing and upgrading the Phone system.

### Utilities

- ◆ Replacing corroded VAV coils in phases in Chemical Wing areas.
- ◆ Replacing and upgrading Chiller for Textile Bldg.
- ◆ Replacing and upgrading gas piping and heaters in Greenhouse.

### Facilities and Grounds

- ◆ Replacing and upgrading Admin. and Chem. Wing bathroom vanities and cabinets.
- ◆ Replacing 1<sup>st</sup> floor Chemical Wing windows; adding new tinting for industrial wing windows.
- ◆ Renovating/Replacing 2<sup>nd</sup> floor Industrial Wing Lab floors, ceilings, and paint walls.



**Almost all the improvements will upgrade our facilities and increase energy efficiency and operations.**



## Recent SRRC Publications

**Submitted by: Suhad Wojkowski**

Full text pdfs of SRRC publications are available in the Eprints database via “Library” link on the SRRC Intranet page: <http://nola.srrc.usda.gov:8000/srrcmenf.htm>

Peter J. Bechtel, John M. Bland, Kristin Woods, Jeanne M. Lea, Suzanne S. Brashear, Stephen M. Boue, Kim W. Daigle and Karen L. Bett-Garber. (2018) [\*Effect of Par Frying on Composition and Texture of Breaded and Battered Catfish\*](#). Foods 7, 46; doi:10.3390/foods7040046.

D. Bhatnagar, K. Rajasekaran, M. Gilbert, J.W. Cary and N. Magan. (2018) [\*Advances in Molecular and Genomic Research to Safeguard Food and Feed Supply from Aflatoxin Contamination\*](#). World Mycotoxin Journal 11 (1): 47-72.

John M. Bland, Karen L. Bett-Garber, Carissa H. Li, Suzanne S. Brashear, Jeanne M. Lea and Peter J. Bechtel. (2018) [\*Comparison of Sensory and Instrumental Methods for the Analysis of Texture of Cooked Individually Quick Frozen and Fresh-Frozen Catfish Fillets\*](#). Food Sci Nutr. 1–14.

Sechin Chang, Brian Condon, Elena Graves and Jade Smith. (2018) [\*Anti-Flammable Properties of Cotton Fabrics Using Eco Friendly Inorganic Materials by Layering Self-Assisted Processing\*](#). International Journal of Materials Science and Applications 7(4): 115-125.

Sechin Chang, Brian Condon, Jade Smith and Michael Easson. (2017) [\*Preparation of Flame Retardant Cotton Fabric Using Environmental Friendly Supercritical Carbon Dioxide\*](#). International Journal of Materials Science and Applications 6(6): 269-276.

Yue Liua, J. Vincent Edwards, Nicolette Prevost, Yuxiang Huang and Jonathan Y. Chena. (2018) [\*Physico- and Bio-Activities of Nanoscale Regenerated Cellulose Nonwoven Immobilized with Lysozyme\*](#). Materials Science & Engineering C 91: 389–394.

Christopher P. Mattison, Ruhi Rai, Robert E. Settlege, Doug J. Hinchliffe, Crista Madison, John M. Bland, Suzanne Brashear, Charles J. Graham, Matthew R. Tarver, Christopher Florane, and Peter J. Bechtel. (2017) [\*RNA-Seq Analysis of Developing Pecan \(Carya illinoensis\) Embryos Reveals Parallel Expression Patterns among Allergen and Lipid Metabolism Genes\*](#). J. Agric. Food Chem. 65, 1443–1455.

Jay Shockey, Michael K. Dowd, Brian Mack, Matthew Gilbert, Brian E. Scheffler, Linda Ballard, James Frelichowski and Catherine Mason. (2017) [\*Naturally Occurring High Oleic Acid Cottonseed Oil: Identification and Functional Analysis of a Mutant Allele of Gossypium barbadense Fatty Acid Desaturase-2\*](#). Planta, 245. pp. 611-622.

Michael A. Watson, Jeanne M. Lea and Karen L. Bett-Garber. (2017) [\*Spray Drying of Pomegranate Juice Using Maltodextrin/Cyclodextrin Blends as the Wall Material\*](#). Food Sci Nutr. 5:820–826.